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THESIS

THE BOOST PROGRAM AND ITS EFFECT ON RETENTION AND PERFORMANCE

by

Tracy D. Whiteley

December 2000

Thesis Advisor: Samuel E. Buttrey
Second Reader: Lyn R. Whitaker

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This thesis compares the retention and performance of Navy officers commissioned through the Broadened Opportunity for Officer Selection and Training (BOOST) program who are taken from the fleet (Track I) with those who are taken from the civilian sector (Track II). Based on records of the BOOST classes 1981-1992, it is shown that prior-enlisted officer (Track I) BOOST graduates obtain a subspecialty, receive graduate education, and enter the Lieutenant Commander promotion board at statistically significant higher rates than their civilian (Track II) counterparts. It is hypothesized that candidates' with a "prior service" background have more knowledge of, commitment to, and overall understanding of the military that will help them succeed as officers.

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THE BOOST PROGRAM AND ITS EFFECT ON RETENTION AND PERFORMANCE

Tracy D. Whiteley
Lieutenant Commander, United States Navy
B.S., Drexel University, 1990

Submitted in partial fulfillment of the
requirements for the degree of

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ABSTRACT

This thesis compares the retention and performance of Navy officers commissioned through the Broadened Opportunity for Officer Selection and Training (BOOST) program who are taken from the fleet (Track I) with those who are taken from the civilian sector (Track II). Based on records of the BOOST classes 1981-1992, it is shown that prior-enlisted officer (Track I) BOOST graduates obtain a subspecialty, receive graduate education, and enter the Lieutenant Commander promotion board at statistically significant higher rates than their civilian (Track II) counterparts. It is hypothesized that candidates with a "prior service" background have more knowledge of, commitment to, and overall understanding of the military that will help them succeed as officers.

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TABLE OF CONTENTS

I. INTRODUCTION 1

A. RESEARCH PROBLEM 1

B. BACKGROUND 2

C. RESEARCH OBJECTIVE 5

II. LITERATURE REVIEW 7

A. OVERVIEW 7

B. JOB SATISFACTION 9

C. CIVILIAN RESEARCH 12

1. Personal Characteristics and Job Satisfaction 15

2. Job Satisfaction and Job Behavior 18

3. Measurement of Job Satisfaction 20

D. MILITARY RESEARCH 22

E. SUMMARY 25

III. METHODOLOGY 29

A. BUPERS OMF 29

1. Description of OMF Database 29

2. Data Extraction 29

B. PROCEDURE 30

IV. RESULTS 33

A. DESCRIPTIVE STATISTICS 33

1. Sample Demographics 33

2. Statistical Analysis 34

V. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS 43

A. SUMMARY 43

B. CONCLUSIONS 44

C. RECOMMENDATIONS 46

APPENDIX A. CATEGORICAL STATISTICS 49

APPENDIX B. DESCRIPTIVE STATISTICS 51

LIST OF REFERENCES 55

INITIAL DISTRIBUTION LIST 61

LIST OF FIGURES

Figure 2.1. Hierarchy of Needs 14

Figure 2.2. River of Life Satisfaction Accumulates into the Gulf of Life Satisfaction... 22

Figure 4.1. Track I BOOST Enrolled Compared to Track I Retained 34

Figure 4.2. Comparing BOOST Enrollees with BOOST Retained 35

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LIST OF TABLES

Table 2.1. Trends in Propensity to Serve on Active Duty 8

Table 3.1. OMF Variables 31

Table 3.2. BOOST Graduation vs. Attrition Rates 32

Table 4.1. Retention by Designator 36

Table 4.2. Retention by Level of Education 37

Table 4.3. Retention by Commissioning Source 38

Table 4.4. Retention by Dependency Status 39

Table 4.5. Retention by Subspecialty 40

Table 4.6. Retention by Rank 40

Table 4.7. Retention by Longevity 41

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EXECUTIVE SUMMARY

Recruitment, selection, and training of competent officers are crucial to the success of the Navy's personnel readiness and management objectives. The task of accessing new officers has grown extremely complicated over the past twenty years due to the requirement to obtain men and women with highly technical backgrounds to operate the newly sophisticated and computer-intensive systems in the military. The Broadened Opportunity for Officer Selection and Training (BOOST) provides enlisted sailors with the opportunity to obtain academic skills, with the intention of them eventually acquiring a military commission. In addition to the challenges of recruiting, retaining competent officers is also becoming increasingly difficult.

The active-duty military has gone through an immense change due to the force drawdown, the booming civilian economy, and the large gap between military and civilian pay (Cohen, 1999). Retiring as an officer is neither as "prestigious" nor as financially attractive as it once was. Job satisfaction is difficult to reach and maintain. This all leads to low-level retention rates throughout the military. Because the BOOST program recruits prior service members (Track I), as well as civilian high school graduates (Track II), it has the potential for affecting retention as well as recruitment. Prior service applicants have a "flavor" of what the Navy lifestyle is, the job entitlements, and how the total culture works. These officer graduates of BOOST may have a greater propensity to seek the "prestige" of retirement, be more satisfied, and commit to a longer term overall.

This thesis analyzes different demographics and characteristics of BOOST graduates throughout their naval careers. It also investigates similarities and differences

in the performance and retention of Track I and Track II graduates. Cross-tabulation analysis is used to explore the relationships between selected variables and officer performance and retention. Statistical inferences are made from the two different BOOST populations to forecast the characteristics and demographics of future populations. Data on 1,474 officers that had graduated from the BOOST program between 1981 and 1992 and were commissioned into the United States Navy was available from Defense Manpower Date Center-West.

The thesis results show that the Track I officer population is more likely to succeed than the Track II officer population. The Track I officers are receiving postgraduate education, obtaining a subspecialty, and becoming eligible for Lieutenant Commander at a higher percentage rate than the Track II officers. The increased frequency with which Track I officers reach these significant career milestones points to an increased probability that these officers will continue to serve until retirement. The Navy could utilize these results more specifically by targeting the recruiting for the BOOST program towards the active duty enlisted population. Since the Track I officer seems to succeed and be retained at a higher proportion than the Track II officer, it would be in the best interest of the United States Navy to specifically recruit the prior enlisted member to enter the BOOST program.

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DEDICATION

To my loving husband Mark, for your longsuffering, understanding and support during these last two traumatic years. To my two wonderful blessings, Kaleb and Ethan who never questioned why mommy had so much schoolwork to do, you are my joy and I love you both more than you can realize. To my parents and family who have supported me my entire life and continue to do so, once again I humbly say I am glad God put me in this family and I will never forget your support and love. To Jesus Christ, my Lord and Savior, I will continue to endure the trials and tribulations, as long as you continue to walk beside me.

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I. INTRODUCTION

A. RESEARCH PROBLEM

Recruitment, selection, and training of competent officers are crucial to the success of the Navy's personnel readiness and management objectives. The task of recruiting and retaining new officers has grown extremely complicated over the past twenty years. The challenge is to obtain men and women with highly technical backgrounds who can operate the newly sophisticated and computer-intensive military systems, and who fit into a military environment. The Broadened Opportunity for Officer Selection and Training (BOOST) provides enlisted sailors with the opportunity to obtain academic management skills, which could eventually lead to a commissioning. It also provides motivated civilians an opportunity to join the military and receive an education.

The active-duty military has gone through an immense change due to the force drawdown, the booming civilian economy, and the large gap between military and civilian pay (Cohen, 1999). Retiring as an officer is neither as "prestigious" nor as financially attractive as it once was. Job satisfaction is difficult to reach and maintain. These factors contribute to low-level retention rates throughout the military. Because the BOOST program recruits (prior service Track I) members, as well as civilian high school graduates (Track II), it has the potential for affecting retention as well as recruitment. Prior service applicants have a "flavor" of what the Navy lifestyle is, the job entitlements, and how the total culture works. These officer graduates of BOOST may have a greater propensity to seek the "prestige" of retirement, be more satisfied, and commit to a longer term than civilian recruits. This research follows and analyzes several years of BOOST

graduates throughout their naval careers and investigates similarities and differences in the performance and retention of Track I and Track II graduates.

B. BACKGROUND

The late Admiral Michael Boorda's dream was to open the officer ranks to a larger number of qualified enlisted personnel who lacked a college education. His vision was to establish Navy enlisted commissioning programs to allow more opportunities for enlisted ranks similar to the way in which he obtained his education, commissioning and eventually the highest rank attainable for any officer. The Chief of Naval Operations was also trying to open the opportunities for qualified personnel, and implemented the Broadened Opportunity for Officer Selection and Training (BOOST) program in 1969. This program exists "to support Navy officer accession goals by providing an opportunity for enlisted men and women and some selected civilians to undertake a comprehensive program of academic preparation and enrichment." (OPNAV 1500, Jul 99)

With the post-Cold War drawdown essentially complete, the Navy has maintained the highest quality, best-trained and most diverse force in history, led by a strong officer community (Cohen, 1999). However, to ensure this continued success, the Navy must continue to focus on recruiting, training, quality of life, job satisfaction, and retention. Recruiting for the Officer Corps has become very challenging over the past several years. In 1998, a robust economy, the lowest unemployment rate in 29 years, increased college attendance among potential recruits, and fewer veterans available to assume role model positions, made recruiting the most difficult since the 1970's (Cohen, 1999).

The Department of Defense continues to monitor recruitment and retention. The high-tech skills in which the Navy trains its officers are in frequent demand within the

civilian economy. The discipline associated with military duty, the level of responsibility placed on the service members, and the high-tech training that the military provides all serve to make military members a valuable commodity in today's job market. In January 1999, Secretary Cohen announced a major initiative to provide across-the-board pay raises for all service members, and to improve the military retirement system (Cohen, 1999). However, attractive salary and benefits packages, coupled with geographic stability, predictable quality of life and job satisfaction, influence many to consider private-sector opportunities (Cacciatore, 1999).

One way to increase retention is to identify potential candidates for specific programs that will give them the education, training, and leadership capabilities required to maintain the Navy's high standards. Future Naval officers, once selected, can receive their commissioning through various accession sources, including the United States Naval Academy (USNA), Naval Reserve Officer Training Corps (NROTC), Officer Candidate School (OCS), Enlisted Commissioning Program (ECP), and the Seaman to Admiral Program. These programs have high entrance qualifications, which limit the number of eligible candidates, especially among the currently enlisted sailors who have become the backbone of aircraft squadrons or divisions onboard a naval vessel. These young sailors have already been highly trained in a specific area, often show potential for further advancement, and are demonstrating leadership qualities. The BOOST program was designed to ensure that "upward mobility opportunities are available to persons who have demonstrated qualities necessary for careers as unrestricted line officers, but whose past academic performance does not qualify them for immediate selection into an officer accession program." (OPNAV 1500, Jul 1999)

The BOOST program contributes to the Navy's accession through two different avenues: Track I prior service candidates and Track II high school civilian candidates. Track I prior service candidates are the sailors who have been in the Navy for some time, have had technical and physical training, and who understand the chain of command; in addition, they are put through a rigorous selection process. Track II high school civilian candidates are seniors who have just graduated, and depending on what year they entered the BOOST program, may have had 8 weeks of basic training; in addition, they are also put through a rigorous selection process. They have not had Navy technical training, nor a real adjustment period to the military life. Yet these Track II candidates are fresh out of school and ready for further education, whereas Track I candidates have been out of the mainstream of an educational environment for some time.

Indications that real differences exist between military and civilian culture are not new. In fact, the notion that the military has a distinct set of values has long been accepted (Huntington, 1964). Research tends to focus on two dominant theories that try to explain the connection of "socialization" and "self-selection." The socialization theory supports an idea that the military teaches certain types of attitudes and orientations, both formally and informally (Dornbush, 1955). The self-selection theory focuses on the tendency for certain types of personality to enter the military, while other personality types avoid it (Cockerham, 1979). Prior service personnel who qualify for the BOOST program have had an opportunity to decide if the military lifestyle is concordant to their own personality and future. However the high school graduate is not

afforded the opportunity to "try" out the military and see if he or she can relate with the way the inter-dependent society works.

C. RESEARCH OBJECTIVE

"Doing more with less" has become a favorite motto throughout the United States, but for the Navy it has become a reality. As the budget for the military continues to decline, using scarce resources efficiently becomes crucial to the planning and managing of the Navy. Maximizing retention from officer commissioning programs such as BOOST will save the Navy money and keep quality officers.

The purpose of this research is to compare the performance and retention of Track I fleet input BOOST graduate commissioned Navy officers with Track II civilian input BOOST graduate commissioned Navy officers. This study seeks to evaluate the differences in performance and retention between the two groups and to determine whether graduates of the two tracks are "significantly different." Performance or "success" will be measured as having obtained graduate education, a subspecialty or P-code, and sufficient longevity to enter the Lieutenant Commander promotion boards. Many demographics will be considered through the Officer Master File (OMF). BOOST graduating year groups 1981-1992 are included in this study. If prior-enlisted officers prove to have statistically better retention and performance, then the enlisted force may provide the Navy with fertile ground for growing and nurturing new officers who possess a long-term commitment.

Chapter II contains a literature review on investigative scope, prior studies, and human factors. In Chapter III the methodology used in this study is discussed. Chapter

IV presents the results of this study. Lastly, Chapter V's conclusions include findings and recommendations.

II. LITERATURE REVIEW

A. OVERVIEW

As the United States undergoes a transition into a highly technical 21st century, the country is growing and expanding so quickly that it presents itself with many challenges and obstacles. Increasing global competition, pressures to cut costs and reduce manning levels, declines in the nation's job skill bank, growing diversity in the workforce, and an aging population all conspire to overcome the resources and imagination of business and government leaders today (Leong, 1995). Multiple studies have been done on the civilian sector to understand present trends, among them the 1987 *Hudson Institute Report on Workforce 2000.* This study estimated, first, that the U. S. population would grow more slowly and second, that the population will continue to get older while the labor pool of younger workers will become smaller. Third, it predicted that women would enter the workforce in significantly larger numbers. Finally, it said, only 15% of the new worker applicants would be white males. The rest of the work force will be divided between females, minorities, and immigrants (Leong, 1995).

The future growth of America is drawn from an immensely diverse labor pool. Since the U.S. military draws from the same pool, it follows that the problems facing the nation in the private sector will also affect the public sector. Many corporations and companies across the country have taken aggressive steps to strengthen the shortfalls currently affecting the population, including mentoring programs, co-operation school programs, and school-to-work programs. The Navy has spent so much energy on downsizing that it is having difficulty in maintaining quality personnel (Cohen, 1999). The Navy needs to focus on understanding and keeping abreast of the current situation. It

needs to track the demographic trends and plan accordingly to recruit, train, educate, manage and retain the quality leaders of tomorrow. The current propensity to join the military is declining as shown in Table 2.1 (Arabian & McCormick, 1999). The percentages of those individuals surveyed indicated that joining the military was not a future choice. There seems to be different options now for those surveyed, from going straight to a University to joining a family business, then there was during the Cold War. The Navy faces far different challenges today then it did a decade ago during the Cold War. Today's challenges are seemingly more difficult to meet (Oliver, 1998).

16-21 YEAR-OLD MALES

	1990	1991	1992	1993	1994	1995	1996	1997	1998
Army	16*	17*	13	13	11	12	12	11	12
Navy	11*	12*	11*	10	9	10	10	10	9
Marine Corps	11	13	13*	11	11	11	11	11	11
Air Force	15*	16*	14	14	12	12	12	12	12
Any Service	32*	34*	29*	29*	26	28	27	26	26

16-21 YEAR-OLD FEMALES

	1990	1991	1992	1993	1994	1995	1996	1997	1998
Army	6	7	5	5	7	6	6	5	6
Navy	5	6	4*	3*	5	5	6	4*	5
Marine Corps	3	3	3	4	4	4	4	3	4
Air Force	7	9	7	7	5*	7	7	6	7
Any Service	13	15	12	12	13	13	14	12	13

* The difference between this number (with"*") and the 1998 propensity is statistically significant ($\alpha = 0.05$). Propensity estimates are based on a representative sample of American youth, and results will vary slightly from what would have been obtained if all American youth were interviewed. For example, for 16-21 year-olds, estimates usually will be within a percentage point of true population values and will nearly always be within two percentage points.

Table 2.1 Trends in Propensity to Serve on Active Duty (Arabian & McCormick, 1999)

The biggest challenge that the Navy has to overcome is actually internal, to focus on how to maintain the best and brightest sailors (Peniston, 1997). This is absolutely vital now that the Navy has concluded its drawdown and reaches a steady state. The current Navy statistics show that retention must increase (Peniston, 1997). The Department of Defense is now exploring many personnel policies on how to retain the

all-professional force. The highly trained, highly skilled, and highly motivated sailors (enlisted and officer) are the forces that the Navy is trying to maintain in its labor pool (Oliver, 1998). Recruiting and maintaining personnel involves enhancing job satisfaction. By selecting motivated, career-oriented individuals and providing them with opportunities for upward mobility, the BOOST program can be a tool to increase job satisfaction and thereby alleviate attrition. If an individual is satisfied within a job then the propensity to stay is much stronger (Leong, 1995).

B. JOB SATISFACTION

As the Navy completed its drawdown, the statistics showed that too many officers were quitting. The current retention rates were suggesting that there would not be enough personnel to maintain the ship bridges and the aviation cockpits. In 1998, VADM Oliver stated, "We do not have a culture right now that is aggressively trying to retain people." Prior to the drawdown, every commanding officer had to keep a tally on how well his or her unit retained people. As the retention rates fall the Navy is realizing that it may have to move back to simple retention evaluations again. During the Cold War, retention was not a problem. Without the Cold War, the Navy is going to need to expand its benefits, and probably make them comparable to those in the civilian sector. This cultural change might have to include various quality-of-life enhancements that would encourage the all-professional force to stay Navy (Oliver, 1998). Since there is no imminent danger to the country, the appeal to stay has to override the civilian benefits, quality of life and job satisfaction.

One of the most pressing problems facing organizations today is how to motivate employees to work more productively and to increase their feelings of satisfaction,

involvement, and commitment (Schultz & Schultz, 1998). Herzberg proposed the motivator-hygiene, or two-factor theory, which deals with both motivation and job satisfaction. The theory has stimulated a great deal of research, although the results have not been consistently supportive. The weight of evidence supporting the theory is low, yet it has led to a redesign of many jobs (Herzberg, 1966, 1974). According to Herzberg, there are two sets of needs: the motivator needs, which produce job satisfaction, and the hygiene needs, which produce job dissatisfaction. The motivator needs (the higher needs) motivate employees to high job performance. Motivator needs are internal to the work itself. They include the nature or content of the job tasks and the employees' level of responsibility, achievement, recognition, advancement, and career development and growth. Stimulating, challenging, and absorbing work can satisfy them. Job dissatisfaction is produced by unsatisfied hygiene needs (the lower needs). Hygiene needs are external to the tasks of a particular job and involve features of the work environment, such as company policy and administration, supervision, interpersonal relations, working conditions, and salary and benefits. When the hygiene needs are not satisfied, the result is job dissatisfaction (Schultz & Schultz, 1998). Herzberg's theory focused attention on the importance of internal job factors as motivating forces for employees. If the motivator needs to stimulate employees to perform at their best and to foster a positive attitude toward the job, then redesigning the job to maximize opportunities such as giving employees a greater role in planning, performing, and evaluating their work enhances job enrichment. Increasing job enrichment provides an opportunity to satisfy the motivator needs (Schultz & Schultz, 1998). Once the motivator

needs are satisfied then job satisfaction results, and motivation to stay on the job is prevalent.

Job satisfaction refers to a worker's emotional, affective or evaluative response toward their job. Job satisfaction is most widely discussed and enthusiastically studied in such related disciplines as industrial-organizational psychology, social psychology, organizational behavior, personnel and human resource management, and organizational management (Cranny, Smith & Stone, 1992). Jobs can be complex and have many characteristics or facets. Psychologists describe the complex nature of job satisfaction by saying that it is multi-dimensional, meaning that it has a number of distinct, relatively independent components. This multi-dimensionality has at least two important implications. The first is that it can be misleading to discuss job satisfaction without specifying the precise aspect of the job to which the satisfaction refers. The second is the measurement of satisfaction (Locke & Fisher, 1992). Personal factors can also influence job satisfaction. These factors include age, health, length of job experience, emotional stability, social status, leisure activities and family and other social relationships (Schultz & Schultz, 1998). A number of studies have confirmed that job satisfaction is related to satisfaction with all aspects of life. People who have positive attitudes toward their work are likely to have positive feelings about their personal and family life. Data from national surveys of middle-aged black men, black women, white men, and white women found that for all four groups job satisfaction was positively related to life satisfaction (Crohan, Antonucci, Adelmann, & Coleman, 1989).

One of the most famous research projects on job satisfaction is the Hawthorne study (Muchinsky, 1993). This study investigated monotonous working conditions on

productivity and efficiency and concluded that the workers' attitudes toward their jobs and their perceptions of job characteristics determine the effects of such things as pay, hours of work, working conditions, and the physical work environment. The primary outcome was that good relations and open communications between workers and management were essential for job satisfaction. Since the Hawthorne study, there have been a number of theoretical approaches to explaining the causes and effects of job satisfaction.

C. CIVILIAN RESEARCH

Organizations measure job satisfaction primarily because of its presumed direct relationship to the short-term goals of cost reduction through increased individual productivity and reduced turnover (Cranny & Smith, 1992). Job satisfaction is a complex phenomenon and there are many theories that attempt to explain 'happiness' and motivation within a job. In 1959, Herzberg et al. found that there were systematic relationships between workers' attitude and their behavior. According to Herzberg, job satisfaction depends upon a certain set of conditions, whereas job dissatisfaction is the result of an entirely different set of conditions. Thus, although it is possible to think of satisfaction and dissatisfaction as the two extremes on a single continuum, they are determined by different factors. The two-factor theory was formalized in 1959 by research conducted by Herzberg et al. The theory states that certain aspects of work are related to job satisfaction, whereas other aspects are related to job dissatisfaction. In other words, satisfaction and dissatisfaction can be analyzed in terms of content and context. The theory focuses on work and job characteristics as the causes of overall satisfaction. Workers who have more contentment in their jobs will tend to be more

satisfied, and vice versa. If the level or amount of either factor were changed, then the theory would predict a change in satisfaction.

Maslow (1943; 1970) developed the best-known need theories. The "Hierarchy of Needs" is related to human needs that are positioned in a hierarchy of importance, with lower-level needs, such as physiological and safety, dominating behavior until they are filled. At that time higher-level needs, such as esteem and belonging, are then activated. Because the fulfillment of any one level of need activates the next level, a worker will always have an active need, making long-term job satisfaction seem unlikely (see Figure 2.1). Another theory of job satisfaction is the Value Theory proposed by Locke in 1976. Locke suggested that job satisfaction might be more closely related to whether or not work provides people with what they want, desire, or value. People examine what their jobs provide in terms of pay, working conditions and promotion opportunities. Then these perceptions are compared to the value or importance in a job. Job satisfaction results if the comparison matches. However, knowing the importance or value that a worker attaches to a particular outcome does not by itself predict how satisfied the worker will be.

Lawler's Facet Satisfaction Model (1973) compares perceptions of what a worker believes should be the job outcomes, such as pay, recognitions, and promotions, and what are actually received. Perceptions of what should be received depend upon the perceptions of the inputs the worker brings to the job, including skill, education and experience, as well as perceptions of job characteristics, such as responsibility and difficulty. Several studies have explored the relationship between job satisfaction and life satisfaction, including a sample of 804 employees, selected to be representative of the

workforce in the United States (Judge & Watanabe, 1993). Each employee was interviewed and given questionnaires to assess job and life satisfaction. The results showed a positive and reciprocal relationship between job and life satisfaction in the short term; that is, each influenced the other. Over time, the effect of life satisfaction on job satisfaction was significantly stronger than the converse, indicating that general life satisfaction may be the more influential of the two factors.

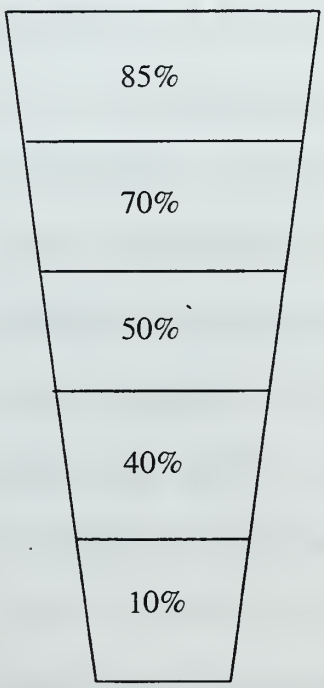

Figure 2.1 Hierarchy of Needs (Maslow, 1943; 1970)

Throughout the past century there have been many job satisfaction theories; most of these have been based on comparison processes. However, comparison theories have enjoyed only limited empirical support. In Maslow's (1943, 1970) "Needs Hierarchy," it appears that the basic premises underlying his theories are flawed. In Locke's (1976) and Lawler's (1973) theories, there is little empirical research upon which to base an evaluation. The research that does exist suggests that these theories may not account for

differences in the types and complexity of cognitive comparisons made by workers. There are emerging perspectives in which work attitudes are actually influenced by a variety of personal and situational factors such that no one single theory is likely to provide a complete explanation for job satisfaction.

1. Personal Characteristics and Job Satisfaction

Many theories of job satisfaction have been proposed to explain the development of workers' attitudes, but satisfaction research has addressed practical issues such as what conditions are related to job satisfaction (Muchinshy, 1977). Many characteristics of the job and the workplace affect job satisfaction. By redesigning job and work environments, it is possible for management to raise job satisfaction and productivity (Schultz & Schultz, 1998). For example, it might redesign jobs to maximize opportunities to satisfy the needs for achievement, self-actualization, and personal growth and development and enrich jobs to enhance the motivator needs and the core job characteristics that can increase job satisfaction. Personal characteristics that can influence job satisfaction include age, sex, race, intelligence, use of skills, and job experience (Schultz & Schultz, 1998). Although employing organizations cannot alter these factors, they can be used to predict satisfaction among various groups of workers.

In general, job satisfaction increases with age; the youngest workers report the lowest job satisfaction. This relationship holds for blue-collar and white-collar employees and for male and female employees. Many young people are disappointed with their first jobs because they fail to find sufficient challenge and responsibility (Schultz & Schultz, 1998). The research evidence about possible differences in job satisfaction between men and women employees is inconsistent and contradictory. A

large-scale questionnaire study of more than 6,000 employees in nine Western European countries found no clear pattern of differences between males and females in job satisfaction (de Vaus & McAllister, 1991). Other studies have shown that the sources of job satisfaction differ between women who voluntarily choose a career in the business world and women who are forced to enter the work force to support their families. It may not be gender, as such, that relates to job satisfaction as much as the group of factors that varies with sex. For example, women are typically paid less than men are for the same work, and their opportunities for promotion are fewer (Schultz & Schultz, 1998). Many female employees believe that they have to work harder and be more outstanding on the job than male employees before they receive comparable rewards. Obviously, these factors influence job satisfaction.

Before a person can be concerned with job satisfaction, he or she must have a job. Although there is a large, thriving middle class among black and ethnic minority employees, large numbers of nonwhite persons who want to work are unemployed, are employed irregularly, or are too discouraged to seek employment. In general, more white than nonwhite employees report satisfaction with their jobs (Schultz & Schultz, 1998). Yet the primary concern for many workers is not satisfaction but finding a job. Cognitive ability does not appear to be a significant determinant of job satisfaction, but it may be important when considered in relation to type of work. For many jobs, there is a range of intelligence associated with high performance and satisfaction. People who are too intelligent for their work may find insufficient challenge, which leads to boredom and dissatisfaction. People in jobs that require a higher level of intelligence than they have may become frustrated because they are unable to handle the job's demands. Also, job

satisfaction appears to increase after a number of years of experience and to improve steadily thereafter. The relationship between job satisfaction and length of work experience parallels the relationship with age (Schultz & Schultz, 1998).

A common complaint is that people's jobs do not allow them to exercise their skills or apply the knowledge acquired during their educational training. Surveys of engineers show high dissatisfaction with job facets such as pay, working conditions, supervisors, and opportunities for promotion (Rynes, Tolbert, & Strausser, 1988). Other studies show that people are much happier at work if they have the chance to use the abilities they believe they possess (Eklund, 1995). Another study investigated the relationship between job satisfaction and job congruence. Those individuals with the best congruence - the best match between their abilities and job demands - had aspired to their present jobs early and also majored in the field leading directly to that job. Thus, they were using skills acquired and developed through college. These individuals were more satisfied with income, fringe benefits, and promotion opportunities than were the individuals with low congruence. Those with low congruence - the poorest fit between their abilities and their jobs - had not aspired to their present jobs while in college, nor had they majored in a field leading to that job (Elton & Smart, 1988).

The higher the occupational or status level of a job, the higher the job satisfaction. Executives express more positive job attitude and feelings than do first-line supervisors, who, in turn, are usually more satisfied than their subordinates (Schultz & Schultz, 1998). The higher the job level, the greater is the opportunity for the satisfaction of motivator needs and the greater are the autonomy, challenge, and responsibility of the work.

Satisfaction of Maslow's esteem and self-actualization needs also increases with each level in the organizational hierarchy.

2. Job Satisfaction and Job Behavior

Knowing what variables are related can allow researchers to predict what types of people will be satisfied under a given set of conditions. Also knowing the variables associated with satisfaction can help estimate to what extent improving satisfaction might help organizational problems such as low performance or turnover. There have been many interesting interpretations of the relationship between job satisfaction and productivity (Lawler & Porter, 1967). Instead of suggesting that job satisfaction leads to improved performance, improved performance may cause job satisfaction. High job satisfaction has been related to prosocial behavior, that is, helpful behavior directed at customers, co-workers, and supervisors to the benefit of employees and their organization.

Withdrawal and absenteeism are behaviors by which workers remove themselves either temporarily or permanently from their jobs. The cost is a major problem for organizations. On any given workday in the United States, 16 to 20 percent of employees do not show up for work (Muchinshy, 1977). Absenteeism accounts for more time lost from work than do strikes and lockouts, and it costs businesses up to $30 billion a year. There seems to be a negative correlation between job satisfaction and absenteeism. The Process Model of Attendance developed by Steers and Rhodes (1978) states that work attendance is a function of both motivation to attend and the ability to attend. Thus, a worker may not come to work because he or she does not want to work, and/or because he or she is prevented from coming to work.

Turnover is a potentially costly problem for organizations. Employers are faced with the costs and inconvenience of recruiting, selecting and training replacements (Mobley, 1977). Turnover has the potential for disrupting social relationships within work groups, which may affect the performance of workers remaining on the job (Mobley, 1982). Although some turnover can be functional, many organizations make turnover an important practical concern. Mobley, Griffeth, Hand, and Megline (1979) developed the most well-known model of turnover. In this model, age, tenure, job content, commitment, and intention to remain on the job affect turnover. The model specifies that dissatisfaction causes the worker to think about quitting, which in turn leads to the decision to search for a different job. The intention to quit, according to the model, yields an immediate process of quitting. Research on turnover has shown that there is a link between job dissatisfaction and quitting. Job dissatisfaction seems to contribute to a chain of decisions, and the decisions will vary depending on the individuals, jobs, and economic conditions. Another factor related to turnover is organizational commitment.

Organizational commitment is characterized by a strong belief in and acceptance of the organization's goals and values plus a willingness to exert considerable effort on behalf of the organization, and a strong desire to maintain membership in the organization. Steers, Mowday and Porter (1981) examined the role of organizational commitment in the turnover process. They concluded that commitment is far superior to satisfaction as a predictor to turnover. Unlike satisfaction, commitment is thought to develop over time, and is not likely to change with day-to-day events within the work place. Another study found that the higher the commitment, the lower the turnover rate (Jaros, Jermier, Koehler, & Sincich, 1993; Tett & Meyer, 1993). Turnover is higher in

times of low unemployment and expanding job opportunities than it is in times of high unemployment and limited opportunities. When people perceive that the economic climate is good and the economy is growing, they find it easier to consider changing jobs in the hope of increasing their job satisfaction.

Although many managers believe that there is a strong correlation between a worker's job satisfaction and performance, there has been no valid data proven to link these. Iaffaldano and Muchinsky (1985) speculated that one of the reasons for continuing research on satisfaction and performance, with evidence that the two are independent, is that there is a belief that the two should be related, and that more research might reveal this relationship. Using meta-analysis techniques, they found no clear association between satisfaction and performance.

The relationships between job satisfaction and other variables are fewer and weaker than once believed. There is not a consistent relationship between satisfaction and absenteeism, and only an indirect association between satisfaction and turnover (Iaffaldano & Muchinsky, 1985). Only small differences in satisfaction across demographic and occupational groups have been discovered, and even these may be better explained by differences in pay, education and job tenure.

3. Measurement of Job Satisfaction

As researchers studied different job facets and investigated the multitude of variables that might be related to satisfaction, hundreds of different satisfaction measures were developed (Schneider, Gunnarson & Wheeler, 1992). While these instruments have commonalties, they differ in the specific facets of satisfaction that they are designed to measure. No two of these measures yield comparable scores, and the data collected about

satisfaction is difficult to analyze. This has significantly contributed to the inconsistency in research results.

A unique approach to measuring job satisfaction is the Faces Scale (Kunin, 1955). The Faces Scale uses universally recognized facial expressions keeping the measurements simplified. The facets include work, pay, supervision, promotion and co-workers. The underlying principle could be a measurement of other attitudes. The JDI and MSQ each measures job satisfaction with a number of job dimensions or facets, and the Faces Scale uses a simple response item to measure global satisfaction.

The Job Descriptive Index (JDI) is the most frequently used measure of job satisfaction. Developed by Smith, Kendall, and Hulin (1969, 1985), the JDI measures five facets of satisfaction: work, supervision, pay, promotions, and co-workers. Research has shown that the reliability and validity of the scales appear to be a good measure of job satisfaction (Muchinsky, 1993). The "River of Satisfaction" is an analogy as portrayed in Figure 2.2 that shows general job satisfaction is one of the components of life satisfaction. Together with satisfactions with marriage, family, leisure, and other nonwork satisfactions, it accumulates into the "gulf of life satisfaction" (Smith, 1992).

The Minnesota Satisfaction Questionnaire (MSQ) developed by Weiss, Dawis, England and Lofquist (1967) is another popular job satisfaction measuring tool. The MSQ contains 100 items that measure satisfaction with 20 job facets. By measuring the individual differences, the researchers speculated that job satisfaction could be predicted (Weiss, 1973). Four facets were common between JDI and the MSQ: pay, promotion, co-workers, and supervision.

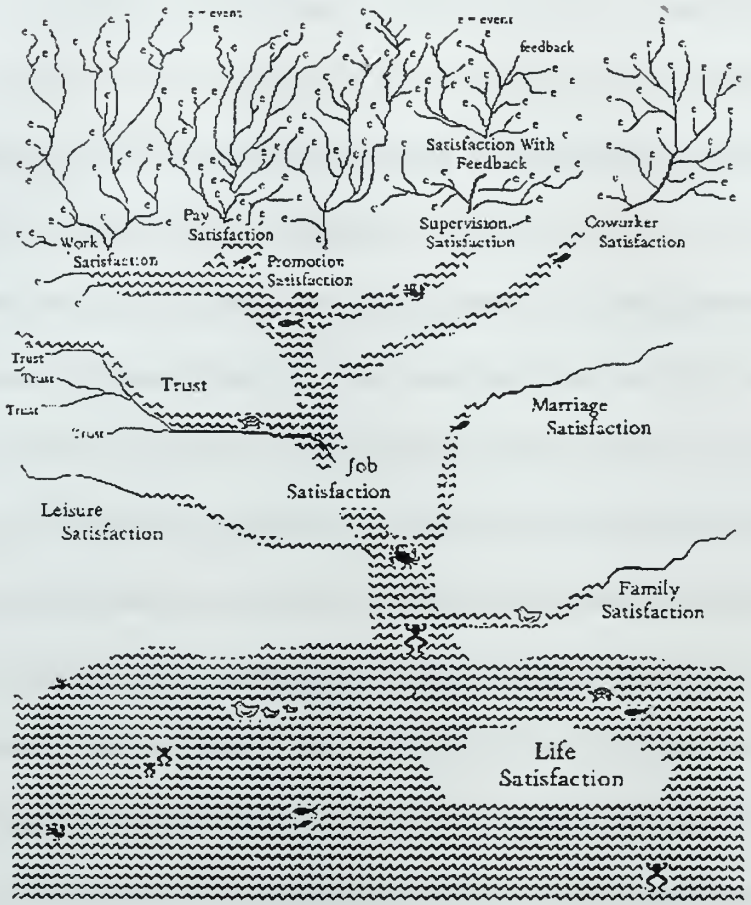

Figure 2.2 River of Life Satisfaction Accumulates into the Gulf of Life Satisfaction (Smith, 1992)

D. MILITARY RESEARCH

Unlike civilian research, military job satisfaction, work behavior, and turnover studies have focused primarily on increased productivity. With the close of the Vietnam War, the Office of Naval Research started conducting numerous research projects on job satisfaction. Hughes (1973) conducted a study on job satisfaction for both the civilian and military and concluded that retention could be enhanced through typical career counseling. Around this time, the Department of the Navy started to administer retention surveys to all military personnel upon their decisions to either stay or exit. Civilian and

military studies are difficult to compare. There seem to be unique characteristics within the military. Military members enter job employment with a specific length of obligation, incurring additional obligations depending upon training. A civilian enters a job not usually expecting to make decisions about tenure. A military member's decision to remain in the job carries a greater deal of commitment than in the civilian sector (Kerr, 1997).

During the 1980's, there was a significant increase in the percentage of married military members. Bell, Stewart, and Gade (1990) used data from the U.S. Army Research Institute to determine how much family factors influenced retention. The study concluded that family quality-of-life programs, like housing and childcare, were important predictors of retention. The 1980's also were a time of strong economic growth for the nation. With this good economy, there was a rise of job opportunities within the civilian sector. Military members, especially aviators, possessed marketable and transferable technical skills and training. Many studies were conducted on the specific reasons for retention.

Doering and Grissmer (1985) supported studies that stated pay and tenure are related to job satisfaction and retention. In their RAND study of active duty retention, pay was found to have a negative correlation with attrition. Marsh (1989) used data from the *1985 DoD Survey of Officers and Enlisted Personnel* to develop a model that would predict retention behavior. Multiple regression analysis revealed that the most important predictors of retention were longevity, highest pay grade expected prior to leaving the Navy, and satisfaction with the overall military life. This model showed the strong commitment toward their military. Past duty stations, individual expectations, and family

status all influenced satisfaction with the military. Job satisfaction has significant effects on commitment and retention.

A survey of 588 Army and Navy ROTC cadets found that there was a strong commitment to their military units and satisfaction with their job duties but that the influence of satisfaction on commitment was the strongest (Mathieu, 1991). A survey of 440 employees of a military supply company found that employee commitment to top management was a better predictor of job satisfaction than was employee commitment to the organization as a whole (Becker, 1992). There is a need to determine the specific aspects of the organization to which employees feel committed. Employees with a strong commitment remain with the organization because they want to, need to and they feel that they ought to do so (Meyer, Allen, & Smith, 1993).

Kocher and Thomas (1994) used data from a 1985 DoD Department of Defense Survey of Officers and a longitudinal study to analyze retention behavior of active duty Army nurses. Logistic regression results showed that job satisfaction, satisfaction with the military life and duty assignments and family status were significantly associated with retention. Lakhani (1991) showed that perceived chances for promotion were a strong predictor of retention. Using data from a 1986 DoD Department of Defense Survey of Officers, Lakhani's regression results claimed that improving satisfaction with the military life and a military member's perceived promotion chances would in fact increase retention. Zinner (1997) used a multivariate logistic regression model to analyze retention among junior Marine Corps officers. The data from *1992 Department of Defense Survey of Officers and Enlisted Personnel and Their Spouses* along with data from the Defense Manpower Data Center's (DMDC) Master Loss File concluded that job

satisfaction, satisfaction within the military, and transferable technical skills to civilian market were all influences on retention.

E. SUMMARY

As civilian research has shown, there have been many theories developed using behavioral attitudes to measure job satisfaction. The measurements overwhelmingly suggest a strong correlation between job satisfaction and retention. Demographic factors as well as contentment attitudes play a predictive type of satisfaction. Satisfaction with work environment, and job content was positively related to retention (Mobley, Griffeth, Hand & Megline, 1979). Increased pay and longevity is related to retention (Doering & Grissmer, 1985). Marsh (1989) reiterated the causes of retention as satisfaction with military life, higher pay and longevity. Family status and overall military life satisfaction also has an impact on retention (Kocher & Thomas, 1994). Higher pay and family status linked satisfaction and retention (Watson, 1981). Military studies supported the civilian research by showing that job satisfaction related positively to retention. Satisfaction with the military environment and military way of life was positively linked to retention (Bell, Stewart & Gade, 1990). Higher pay was found to be a positive influence for retention (Lakhani, 1991). By knowing the demographic areas and job satisfaction attitudes that affect retention the military could start to recruit and develop the all-professional force that is desired. The U.S. Navy can look internally to enhance the overall factors that create a positive influence for job satisfaction. Specifically targeted groups of individuals that continue to be retained and provide a strong quality military should become the population that is strongly recruited. The BOOST program is such an avenue that could

be populated with the highly skilled, highly motivated career-oriented personnel who will retain.

Organizations including the military have many factors to considering when recruiting, training and retaining top-quality individuals. Proper training, cost, and manpower requirements are all essential in identifying the potential labor pool. Other factors such as demographics and worker attitudes play an increasing role in understanding how to retain a high-caliber work force. The present shift in cultural diversity will continue in the foreseeable future. Proactive leadership and management in establishing programs and policies to identify the workforce diversity are essential for continued excellence. Since the military is drawing from the same labor pool as the civilian sector, it is important to identify the shifting trends, provide job satisfaction and continue to stay abreast of the situation to retain personnel.

The Navy will have to look internally to provide job satisfaction and also externally at the current demographic trends toward increasing diversity and an aging workforce. A strong economy will decrease interest for potential military applicants, resulting in more difficult recruiting times ahead for the Navy. More emphasis needs to be placed on recruiting quality minority applicants. Also, alternative recruiting methods need to be identified and instilled. Greater emphasis toward conversion of recruits from Enlisted to Officer ranks should be addressed. It is essential that there be sufficient numbers of qualified Officers at all career levels to meet fleet requirements. To maintain the all-professional force of the 21st century, the Navy will depend on highly trained educated motivated and properly managed and rewarded Enlisted and Officer personnel. The BOOST program is a tool to recruit and train personnel to the Officer ranks. The

personnel applying for the program can be selected on many demographics, including past job satisfaction, the propensity to be satisfied within a job, and career intentions. To maintain these Officers, the internal process of enhancing job satisfaction will play a direct role for the military.

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III. METHODOLOGY

Data for this study was taken entirely from the Officer Master Files (OMF). This chapter describes the data and the methods used to compare Track I and Track II BOOST graduates.

A. BUPERS OMF

1. Description of OMF Database

The OMF database, maintained by the Bureau of Naval Personnel (BUPERS), contains 311 fields of information on every active duty officer in the Navy and Naval Reserve. Records are indexed by social security number, and individual fields are organized into broad categories (BUPERS, 1994). The OMF includes detailed information on the service member's commissioning, education, dependents, service schools, specialty skill codes, and personal demographic information.

2. Data Extraction

The office of the Chief of Naval Education and Training (CNET) provided initial data for analysis. This data consisted of individuals from BOOST graduating classes 1981-1992 divided into two blocks: Track I, prior service input, and Track II, civilian input. These blocks contained BOOST entering and graduating dates, social security numbers, and attrition reason and date if applicable. After graduating from the BOOST program, each individual enters a ROTC program at the university of his/her choice (which may be the Naval Academy). Upon completion of a Bachelor's degree, the member is then commissioned. A few BOOST graduates will choose a commissioning in the United States Marine Corps; these Marine officers were not included in the

analysis. Only midshipmen who elected a Navy commissioning were included in the analysis.

The Defense Manpower Data Center-West (DMDC-West) provided the OMF data for analysis. Of the 4,908 individuals enrolled in BOOST from 1981 through 1992, 3,396 graduated from BOOST (see Table 3.2). Out of the 3,396 BOOST graduates, only 1,474 are currently active duty officers in the United States Navy as of January 2000. This study restricts attention to the successful BOOST graduates who are currently active duty. Over one hundred OMF variables were considered for each of the 1,474 subjects who enrolled into the BOOST program from 1981 through 1992. Only thirteen OMF variables were used to measure performance (see Table 3.1). To ensure there are no missing values for any variables, only officers with complete data on all fields were included in the analysis. There were 230 individual records deleted from this study due to missing variables. The remaining 1,244 individual records were comparable to the original 1,474 individual records. Therefore, the final data considered consisted of 1,244 Track I and Track II BOOST graduates who entered the BOOST program between 1981-1992 and then commissioned into the United States Navy.

B. PROCEDURE

The OMF data set was used to measure performance of naval officers in the fleet. To measure performance, individual subspecialty, graduate education, longevity to the LCDR selection board and promotion results were examined. A complete list of the thirteen OMF variables that capture performance is given in Table 3.1. The differences between careerist intentions (retention in the Navy) of Track I and Track II BOOST

graduates are compared. Numerical summaries will provide a statistical overview of the data, in the next chapter.

Variable/Long Name	Description
ACBD-Active Duty Base Date	YYMMDD of an officer's date of active commissioned service.
DEPNPRI - Primary Dependency Code	Reflects the number and type of an officer's primary family members.
DESIG - Designator	Identifies the category in which an officer is appointed and/or designated and the status of the officer within the category.
DOR - Date of Rank	YYMMDD of an officer's date of rank in his/her current grade.
GRDCURR - Current Grade	Identifies the grade in which an officer is presently serving unless he/she is serving in a Spot Promotion Grade.
INITMSRDT - Initial Minimum Service	YYMM - Year and Month for which the officer's initial obligation was complete.
LEVEL1 - Level of Education	Indicates the highest level of education the officer has received.
RETELGD - Retirement Eligibility Date	YY - Identifies the year in which an officer is eligible for retirement.
SEX - Sex Code	Identifies an officer as male or female.
SKILSUBSPEC - Subspecialty	Reflects the present subspecialty for an officer.
SRCcdPGM - Current Source Code	Indicates the program under which an officer qualified for original appointment.
SSN - Social Security Number	Identifies the officer's social security number.
YG - Precedence Year Group	Reflects the present precedence of an officer for promotional purposes. In most cases the year group generally corresponds to the fiscal year in which he/she was commissioned to Ensign.

Table 3.1 OMF Variables

BOOST Program	TRACK I	% TRACK I	TRACK II	% TRACK II	TOTAL	% TOTAL
Entered BOOST	2385		2523		4908	
Failed BOOST	704	29.52	808	32.03	1512	30.81
Graduated BOOST	1681	70.48	1715	67.97	3396	69.19

Table 3.2 BOOST Graduation vs. Attrition Rates

Of the 4,908 individuals enrolled in the BOOST program from 1981 through 1992, 3,396 graduated from BOOST. Table 3.2 shows that for these years, of the 2,385 Track I's that entered the BOOST program, 29.5% failed, and of the 2,523 Track II's that entered, 32.0% failed. A two-sided large sample test for proportions (Devore, 1995) with the null hypothesis that the proportion of failures are the same for Track I and Track II yields a p-value of 0.06. Although the null hypothesis cannot be rejected at the 0.05 significance level, the small p-value suggests that there may be a small difference, which this test cannot detect and which might be observed in a larger sample.

IV. RESULTS

A. DESCRIPTIVE STATISTICS

1. Sample Demographics

The data set consisted of 1,244 Track I and Track II BOOST graduates, who entered the BOOST program between 1981 and 1992 and then were commissioned into the United States Navy. Of the 1,244 officers, 927 (74.5%) were designated regular Navy, 289 (23.2%) were Reservists, and 28 (2.3%) were trainees such as officers working toward qualification as an Aviator or Surface Warfare Officer. ROTC commissioned the majority of these BOOST graduates with 1,164 (93.6%), while the Naval Academy commissioned 80 (6.4%).

There were 854 (68.7%) Unrestricted Line Officers, 203 (16.3%) Restricted Line Officers and 187 (15.0%) Staff Officers. A large number, 538 (43.3%), had a spouse and children while 315 (25.3%) had just a spouse, and 391 (31.4%) were single. The BOOST graduates had a strong educational background. Only 2 (.2%) had no bachelor's degree while 1,079 (86.7%) had just a bachelor's degree. A significant number, 163 (13.1%), had already obtained a postgraduate degree, and a total of 89 (7.2%) were in the process of obtaining a postgraduate degree.

The vast majority, 896 (72.0%), had no subspecialty while 348 (28.0%) had obtained a subspecialty. There were 131 (10.5%) Lieutenant Commanders (LCDR) in the sample and 769 (61.8%) Lieutenants (LT). The BOOST graduates also included 277 (22.3%) Lieutenants junior grade (LTJG), 64 (5.1%) Ensigns (ENS) and 3 (.2%) CWO2. Many of the officers, 858 (69.0%), were not eligible for LCDR, while 386 (31.0%) were

eligible for the promotion board to Lieutenant Commander. These demographics are summarized in tables in Appendix A.

2. Statistical Analysis

Of the 4,908 enrolled in the BOOST program during the years 1981 through 1992, a total of 48.6% were Track I and a total of 51.4% were Track II individuals. Among BOOST enrollees still in the Navy, 52.6% are Track I's. Figure 4.1 compares the proportion of Track I individuals that enrolled in the BOOST program for each year group with the proportion of Track I's that are still on active duty in the Navy. There were only three years, 1982, 1987, and 1989, where the percentage of Track I's enrolled is less than the percentage retained. It appears that Track I's are generally retained in a higher proportion than that in which they enrolled.

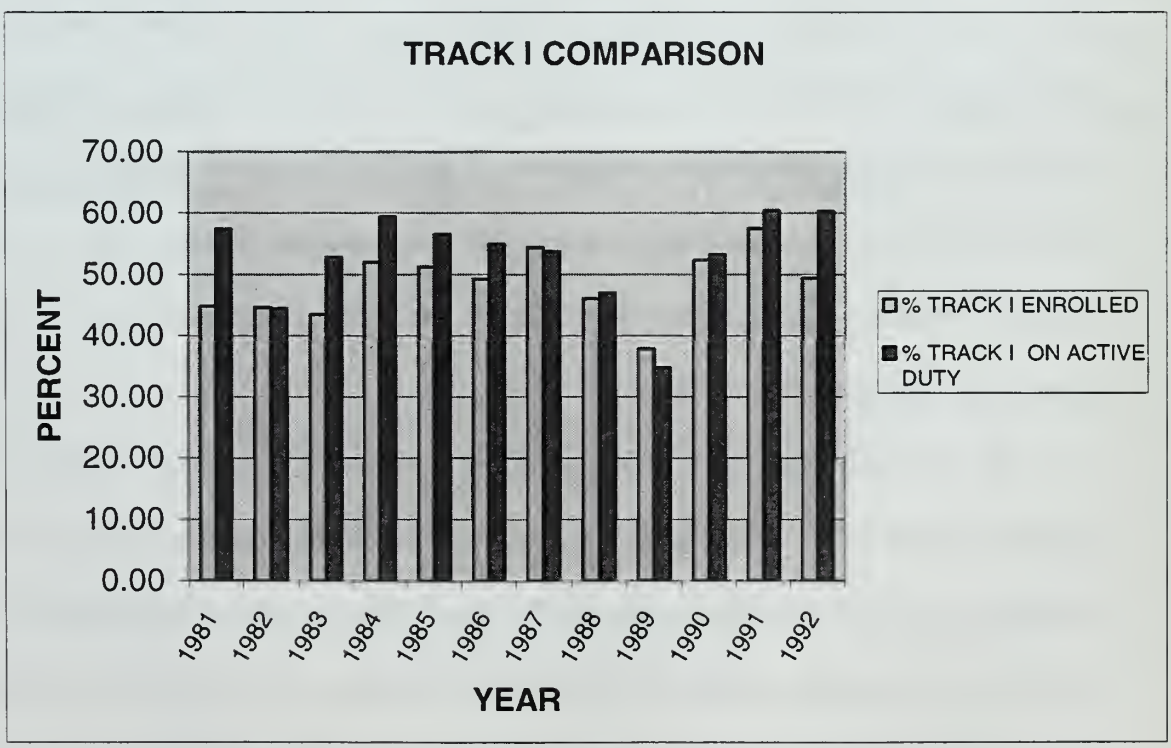

Figure 4.1 Track I BOOST Enrolled Compared to Track I Retained

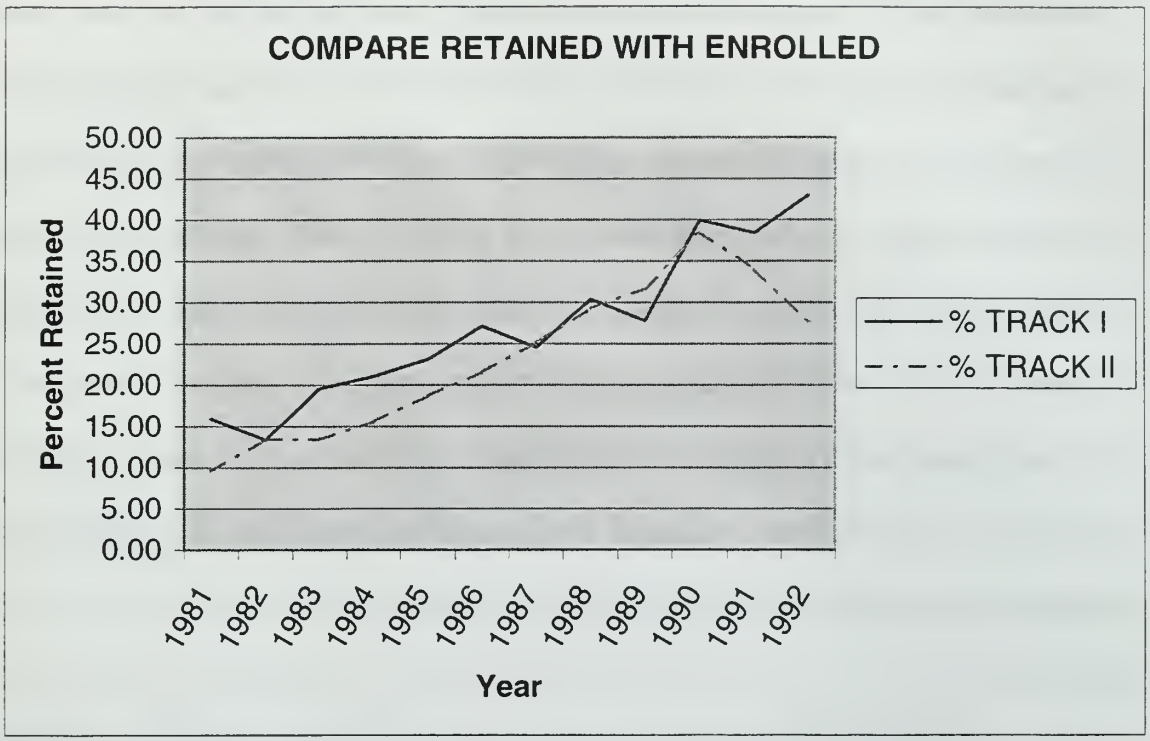

Figure 4.2 Comparing BOOST Enrollees with BOOST Retained

Comparing the number of individuals who were retained in each Track with the actual number enrolled for each Track, it is shown in Appendix B that 27.4% of Track I's were retained while Track II's were retained at a total of only 23.4%. These two percentages give a p-value of .001 for the test of the null hypothesis that the proportion retained in Track I and Track II are the same. The percentage retained for the two Tracks is given by year in Figure 4.2. Out of the 12 years considered, there were only three years in which Track II's had a slightly higher rate of retention than the Track I's. The descriptive statistics are given in Appendix B.

Among the demographic variables, the following were selected for subsequent analyses: designator, level of education, source of commissioning, dependent status, subspecialty, rank, and LCDR eligibility. Table 4.1 displays a cross-tabulation of designator and retention for Track I and Track II. Cross-tabulation analysis is an

evaluation tool by which to explore the relationship between selected variables, and it is used here to compare factors related to officer performance. In each block of the table, the two numbers represent the total number of officers in that block and the percentage of the column total. The rows of the table reflect the overall designator, whereas the columns depict the different Tracks involved. There were a total of 854 (68.7%) Unrestricted Line Officers currently active duty, and 203 (16.3%) Restricted Line Officers along with 187 (15.0%) Staff Corps Officers currently on active duty. There were higher percentages of Track II Unrestricted and Restricted Line Officers, but a much higher percentage of Track I Staff Corps Officers.

DESIGNATOR		TRACK I	TRACK II	TOTAL
Unrestricted Line	n	429	425	854
	%Col Total	65.60	72.03	68.65
Restricted Line	n	80	123	203
	%Col Total	12.23	20.85	16.32
Staff	n	145	42	187
	%Col Total	22.17	7.12	15.03
Column Total		654	590	1244

Table 4.1 Retention by Designator

A cross-tabulation of level of education and retention is displayed in Table 4.2. In each block of the table, the two numbers represent the total number of officers in that block and the percentage of the column total. The rows of the table reflect the level of education, whereas the columns depict the different Tracks involved. There were a total of 1079 (86.7%) officers with only a Bachelor's degree, and a total of 163 (13.1%) with

postgraduate education completed. There is a larger percentage of Track II's with only a Bachelor's degree, and a larger percentage of Track I's with postgraduate education. This might show that Track I's are still pursuing an education with an eye towards job security and retention. A total of 2 (.2%) had no current degree for reasons unknown to the author. Statistical inferences are usually made from a sample of two different populations (Devore, 1995). Here, although the total populations are known, inferences are made from the two different populations to forecast the characteristics and demographics of future populations. A two-sided large sample test for proportions (Devore, 1995) with the null hypothesis that the proportion of graduate education are the same for Track I and Track II yields a p-value of 0.08. A p-value of 0.08 provides weak evidence that there is some difference between the two Tracks.

LEVEL OF EDUCATION		TRACK I	TRACK II	TOTAL
No Degree	n	1	1	2
	%Col Total	0.15	0.17	0.16
Bachelor's	n	557	522	1079
	%Col Total	85.17	88.47	86.74
Postgraduate	n	96	67	163
	%Col Total	14.68	11.36	13.10
Column Total		654	590	1244

Table 4.2 Retention by Level of Education

There were 80 Naval Academy graduates (6.4% of the total population). Officers who received their commissions from ROTC made up the bulk of the officer base with 1,164 (93.6%). Table 4.3 displays a cross-tabulation of source of commissioning and retention. In each block of the table, the two numbers represent the total number of officers in that block and the percentage of the column total. The rows of the table reflect

the commissioning source, whereas the columns depict the different Tracks involved. In 1999, the Navy commissioned 18.2% of its total officer population from the Naval Academy, while ROTC commissioned 19.5%, and 62.3% were commissioned from "other" sources (OPNAV N-131C, 2000). The Naval Academy and ROTC commissioned about the same percentage for 1999, but the overall percentage commissioned for the BOOST program is very different.

COMMISSIONING SOURCE		TRACK I	TRACK II	TOTAL
USNA	n	36	44	80
	%Col Total	5.50	7.46	6.43
ROTC	n	618	546	1164
	%Col Total	94.50	92.54	93.57
Column Total		654	590	1244

Table 4.3 Retention by Commissioning Source

Officers with dependents made up the largest number of BOOST graduates still in the military, 538 (43.3%), among them 331 Track I's (50.6% of the Track I total). Single officers made up a total of 391 (31.4%), with Track I single officers having 168 (25.7% of the Track I total). Table 4.4 displays a cross-tabulation of dependent status and retention. In each block of the table, the two numbers represent the total number of officers in that block and the percentage of the column total. The rows of the table reflect the dependency status, whereas the columns depict the different Tracks involved. The average Track I officer's age is 33.2 years, which is a few years older than the average Track II officer's age of 30.7 years. Because age is likely to be related to marital status and number of dependents, this difference in age might explain the higher proportion of Track I's with dependents.

DEPENDENT STATUS		TRACK I	TRACK II	TOTAL
No Dependents	n	168	223	391
	%Col Total	25.69	37.80	31.43
Spouse Only	n	155	160	315
	%Col Total	23.70	27.12	25.32
Dependents	n	331	207	538
	%Col Total	50.61	35.08	43.25
Column Total		654	590	1244

Table 4.4 Retention by Dependency Status

Most officers, 896 (72.0%), do not have a subspecialty; among these are 438 Track II's (74.2% of the Track II total). 348 (28%) BOOST graduates have obtained a subspecialty, among them 152 Track II's (25.8% of the Track II total). Table 4.5 displays a cross-tabulation of subspecialty and retention. In each block of the table, the two numbers represent the total number of officers in that block and the percentage of the column total. The rows of the table reflect whether or not an officer has a subspecialty, whereas the columns depict the different Tracks involved. Track I's are obtaining a subspecialty at a higher percentage rate than the Track II's. This may show that Track I's are pursuing security within their job field and specializing in a certain area. A two-sided large sample test for proportions (Devore, 1995) with the null hypothesis that the proportion of subspecialties are the same for Track I and Track II yields a p-value of 0.09. A p-value of 0.09 provides weak evidence that there is some difference between the two Tracks.

SUBSPECIALTY		TRACK I	TRACK II	TOTAL
No Subspecialty	n	458	438	896
	%Col Total	70.03	74.24	72.03
Has Subspecialty	n	196	152	348
	%Col Total	29.97	25.76	27.97
Column Total		654	590	1244

Table 4.5 Retention by Subspecialty

The majority of BOOST graduates are currently Lieutenants, 769 (61.8%), among them 377 Track II's (63.9% of the Track II total). Lieutenant junior grade is the next largest group, 277 (22.3%), among them 122 Track II's (20.7% of the Track II total). There are 131 (10.5%) Lieutenant Commanders, among them 66 Track II's (11.2% of the Track II total). There was a small percentage of Ensigns, 64 (5.1%), and very few Chief Warrant Officers, 3 (.2%). Table 4.6 displays a cross-tabulation of rank and retention. In each block of the table, the two numbers represent the total number of officers in that block and the percentage of the column total. The rows of the table reflect the current rank of an officer, whereas the columns depict the different Tracks involved. The Track II's are advancing to Lieutenant Commander at a higher percentage rate.

RANK		TRACK I	TRACK II	TOTAL
LCDR	n	65	66	131
	%Col Total	9.94	11.19	10.53
LT	n	392	377	769
	%Col Total	59.94	63.90	61.82
LTJG	n	155	122	277
	%Col Total	23.70	20.68	22.27
ENS	n	39	25	64
	%Col Total	5.96	4.24	5.14
CWO2	n	3	0	3
	%Col Total	0.46	0.00	0.24
Column Total		654	590	1244

Table 4.6 Retention by Rank

Most designators require an average of 10 years as a commissioned officer prior to being considered by the Lieutenant Commander board. Some designators will be in zone as early as nine years, or have a below-zone look as early as eight years. The analysis took this into account and Table 4.7 summarizes personnel at the eight-year commissioning mark (1992) and earlier. Being considered for Lieutenant Commander reflects longevity within the Navy, because it represents reaching the halfway point until retirement. Of the Track I officers that enrolled into the BOOST program, 359 (69.1% of the Track I total) are either eligible for promotion to Lieutenant Commander or already a Lieutenant Commander. Table 4.7 displays a cross-tabulation of eligibility and retention. In each block of the table, the two numbers represent the total number of officers in that block and the percentage of the column total. The rows of the table reflect the current eligibility status of an officer, whereas the columns depict the different Tracks involved. Track I's are eligible for Lieutenant Commander at a higher percentage rate. A two-sided large sample test for proportions (Devore, 1995) with the null hypothesis that the proportion of eligibility are the same for Track I and Track II yields a p-value of 0.006. This gives strong evidence that the proportion of Track I's reaching the Lieutenant Commander board is higher than the Track II's.

LCDR ELIGIBLE-LONGEVITY		TRACK I	TRACK II	TOTAL
Enrolled	n	1598	1696	3294
	%Col Total	81.66	84.29	82.99
Retained	n	359	316	675
	%Col Total	69.11	68.81	17.01
Column Total		1957	2012	3969

Table 4.7 Retention by Longevity

From the resulting data, it is shown that the Track I officer's are more likely to succeed than the Track II officer. The Track I officer's are receiving postgraduate education, obtaining a subspecialty, and becoming eligible for Lieutenant Commander at a higher percentage rate than their counterparts. Reaching these significant milestones in a Naval Officer's career will normally be associated with an increased probability that the Track I officer will continue to serve until retirement.

One of the main goals for the United States Navy is to retain the best qualified officers. As the results show, the Track I officer population seems to be retaining at a higher proportion. The Navy could utilize these results more specifically by targeting the recruiting for the BOOST program towards the active duty enlisted population. Since the Track I officer seems to succeed and retain at a higher proportion than the Track II officer, it would be in the best interest of the United States Navy to specifically recruit the prior enlisted member to attend the BOOST program.

V. SUMMARY, CONCLUSION, AND RECOMMENDATIONS

A. SUMMARY

Satisfaction with the military environment and military way of life was positively linked to retention (Bell, Stewart & Gade, 1990). Numerous studies confirm the fact that there is a strong relationship between job satisfaction and retention. The United States Navy can specifically target groups of individuals that continue to be retained and provide a quality military. These target groups should become the population that is recruited. It is important for the Navy to identify shifting trends, provide job satisfaction and stay abreast of the retention situation. The BOOST program is an avenue that can be populated with highly motivated career-oriented personnel who will be retained. The individuals applying for this officer program can be selected on the propensity to be satisfied within a job, and career intentions. The Navy can control the percentages of the two populations that are part of the BOOST program. If one population tends to be more satisfied within a job and therefore retained longer, then the Navy can focus on increasing this population, to ensure the all-professional force it desires.

This thesis analyzed characteristics from personnel data in the Officer Master File of individuals entering the BOOST program between 1981-1992. These characteristics included dependency status, designator, rank, level of education, sex, source of commissioning, subspecialty, and year group. The BOOST program consists of two groups, the Track I (prior service) and Track II (civilian) personnel. The two groups were compared to ascertain their success in performance and also retention.

B. CONCLUSIONS

The initial data from the BOOST program showed that 30.8% of all individuals entering the BOOST program during the years 1981-1992 failed the program. The attrition percentage seems to be high. Of the 69.2% that did graduate from the BOOST program only 30.0% are currently commissioned in the Navy. Analyzing the two populations within the BOOST program, the Track I population is retained in the Navy at a higher proportion than its Track II counterpart. A Track I officer has anywhere from two years to six years already invested in the Navy; therefore his or her career intentions may be stronger.

The demographic data indicates that the proportions of officers with an Unrestricted Line designator are much higher than Restricted Line and Staff Corps designators combined. The Track II population did seem to favor the Restricted Line over the Staff Corps, and the Track I population favored the Staff Corps over the Restricted Line. Interestingly, the Staff Corps constitutes the medical and legal arena for the Navy. Since Track I officers have prior service and training and education in a particular field, one can surmise that given Hospital Corpsman, Dental Technician, or Legal training, these individuals choose to continue in the field of their expertise.

A very small percentage of BOOST graduates are commissioned through the United States Naval Academy. The Track II population had a slightly higher proportion of individuals entering the USNA. The BOOST program does not seem to be a stepping-stone to enter the Naval Academy, but rather to enter and receive a commissioning from a ROTC school. For the Track II population, the BOOST program

can be viewed as an opportunity to increase its grades prior to entering a specific University, and also to get an understanding of what the military is all about.

Most officers had dependents, yet the Track I population had a much higher proportion then the Track II population. This may be because Track I officers, on average, are older then their Track II counterparts. Single officers can make major changes in their lives, like leaving the military after their commitment, without affecting any dependents.

If a Naval Officer chooses postgraduate education from the Naval Postgraduate School, the additional obligated service associated with this education increases the likelihood that he or she will stay until retirement. The Track I population receives its postgraduate education at a higher rate than the Track II population. One can surmise that the Track I population is more career-oriented and interested in furthering its education and expertise which can also increase job satisfaction. After completing postgraduate education and the obligated service incurred, an officer likely has passed the 'critical' halfway point towards retirement.

A high percentage of all BOOST graduates have yet to obtain a subspecialty. Yet of those who have, the Track I population is obtaining a subspecialty at a higher percentage rate. It could be that, because of their prior service background, Track I officers may be more focused on a specific job field and, striving to specialize in that specific area, set out to obtain their subspecialty.

Making the rank of Lieutenant junior grade and Lieutenant is considered inevitable barring any particular career-damaging problems. Depending on the designator of the officer, most officers will be eligible for promotion to the Lieutenant

Commander board from eight to eleven years of commissioned service. An officer who is promoted to Lieutenant Commander incurs obligated service time, thereby increasing the probability that he or she will continue to serve until retirement. The Track I population is eligible for the Lieutenant Commander board at a higher percentage rate than the Track II population.

The Track I population seems to have more knowledge, commitment, and overall understanding of the military enhancing the probability of better individual job satisfaction. The results show that the Track I population obtains graduate education, a subspecialty and becomes eligible for the Lieutenant Commander board at a higher percentage rate than the Track II population.

C. RECOMMENDATIONS

Continuing future research in the area of military retention is necessary to keep up with the current trends and to affirm that job satisfaction within the military is increasing. The retention problem cannot be rectified quickly. The military needs to continually keep abreast of why individuals are being retained, and what their specific characteristics and demographics are. Quality of Life Interest Surveys for the BOOST program could be combined with the OMF data available to show any factors not previously considered when looking at retention. A broader study comparing all officer programs with retention could also be helpful.

Comprehensive data for officer programs needs to be reported in a consistent and diligent manner in order to better support analysis of retention for the military. The existing BOOST data was very terse. It should catalog characteristics and demographics for every member entering the BOOST program including sex, race, high school grade

point average, SAT scores, and residency. . The OMF data had many irregularities within its data frame, including blank data in pertinent areas. This resulted in deleting the records of over two hundred officers because of insufficient data.

Since the Track I population is retained at a higher percentage than the Track II population, the United States Navy should take a look at specifically targeting the untapped active-duty labor pool for future officers. The Navy has already spent time, money and training on the active-duty population; it seems sensible to enhance job satisfaction for the enlisted military members by ensuring that all possible opportunities to grow are available. Results of this analysis indicate that retention will follow.

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APPENDIX A. CATEGORICAL STATISTICS

Variable		Count	%
Designation	URL	854	68.65%
	RL	203	16.32%
	Staff	187	15.03%
Service Type	Regular Navy	927	74.52%
	Reservist	289	23.23%
	Trainee	28	2.25%
Level of Education	No undergraduate Degree	2	0.16%
	Bachelor's degree	1079	86.74%
	Postgraduate	163	13.10%
Commissioning Source	USNA	80	6.43%
	ROTC	1164	93.57%
Dependent Status	No dependents	391	31.43%
	Spouse	315	25.32%
	Dependents	538	43.25%
Subspecialty	No Subspecialty	896	72.03%
	Has Subspecialty	348	27.97%
Rank	LCDR	131	10.53%
	LT	769	61.82%
	LTJG	277	22.27%
	ENS	64	5.14%
	CWO2	3	0.24%
LCDR Eligible-Longevity	Eligible	386	31.03%
	Not Eligible	858	68.97%

Table A.1 Categorical Variable Descriptive Statistics

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APPENDIX B. DESCRIPTIVE STATISTICS

YEAR	TRACK I ENROLLED	TRACK II ENROLLED	TOTAL ENROLLED	% TRACK I ENROLLED	% TRACK II ENROLLED
1981	195	240	435	44.83	55.17
1982	150	186	336	44.64	55.36
1983	143	186	329	43.47	56.53
1984	195	180	375	52.00	48.00
1985	225	214	439	51.25	48.75
1986	225	232	457	49.23	50.77
1987	261	219	480	54.38	45.63
1988	204	239	443	46.05	53.95
1989	173	284	457	37.86	62.14
1990	248	226	474	52.32	47.68
1991	203	150	353	57.51	42.49
1992	163	167	330	49.39	50.61
Average				48.58	51.42
Col. Total	2385	2523	4908	48.59	51.41

Table B.1 TRACK I and TRACK II BOOST Enrolled

YEAR	TRACK I RETAINED	TRACK II RETAINED	TOTAL RETAINED	% TRACK I RETAINED	% TRACK II RETAINED
1981	31	23	54	57.41	42.59
1982	20	25	45	44.44	55.56
1983	28	25	53	52.83	47.17
1984	41	28	69	59.42	40.58
1985	52	40	92	56.52	43.48
1986	61	50	111	54.95	45.05
1987	64	55	119	53.78	46.22
1988	62	70	132	46.97	53.03
1989	48	90	138	34.78	65.22
1990	99	87	186	53.23	46.77
1991	78	51	129	60.47	39.53
1992	70	46	116	60.34	39.66
Average				52.93	47.07
Col. Total	654	590	1244	52.57	47.43

Table B.2 TRACK I and TRACK II BOOST Retained

YEAR	% TRACK I	% TRACK II	TOTAL
1981	15.90	9.58	12.41
1982	13.33	13.44	13.39
1983	19.58	13.44	16.11
1984	21.03	15.56	18.40
1985	23.11	18.69	20.96
1986	27.11	21.55	24.29
1987	24.52	25.11	24.79
1988	30.39	29.29	29.80
1989	27.75	31.69	30.20
1990	39.92	38.50	39.24
1991	38.42	34.00	36.54
1992	42.94	27.54	35.15
Column Total	27.42	23.38	25.35

Table B.3 TRACK I and TRACK II
Retained Compared with Enrolled

YEAR GROUP	TRACK I	TRACK II	TOTAL
1985	2	1	3
1986	18	15	33
1987	17	26	43
1988	23	24	47
1989	40	31	71
1990	48	42	90
1991	54	45	99
1992	66	49	115
1993	56	72	128
1994	54	77	131
1995	104	89	193
1996	76	59	135
1997	68	40	108
1998	24	17	41
1999	4	3	7
Column Total	654	590	1244

Table B.4 Retention by Longevity for Year Groups

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